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THOUGHTS on the intended NAVIGABLE COMMUNICATION between the Friths of *Forth* and *Clyde*.

In a Letter to his Grace the Duke of QUEENSBERRY, from a Citizen of Edinburgh.

Geo. Chalmers esq

My LORD,

I Preſume to addreſs this letter to your Grace, as you have been a great friend and patron to every national undertaking in this part of the united kingdom, and have been ſo in particular to the ſcheme for a proper canal between the friths of Forth and Clyde. I have given a good deal of attention to what has been paſſing in this affair for a year paſt; and my occupation as a merchant has given me opportunity to conſider of it in a more enlarged and extenſive view than people out of trade, or who have not thought ſo much of it, can do; and I think it is in no degree ſo well or ſo generally underſtood, even yet, as its great importance deſerves.

I beg leave, therefore, humbly to offer a few thoughts to the public, and your Grace, upon this great national concern; wherein I have no view whatever but the general good, and the information of ſuch perſons whoſe way of life, time, and opportunities, in a great meaſure preclude them from a proper inveſtigation of this matter. If there be any miſtakes in what I advance, they are ſurely not intentional; and I wiſh it may excite ſome abler hand to correct them, and to ſet this affair ſtill in a juſter light before the public.

The Honourable Board of Truſtees for promoting Fiſheries, Manufactures, and Improvements, in Scotland, have great merit with their country for the trouble they took in having the track ſurveyed, and a plan and eſtimate made for a canal, ſome years

ago, by that able engineer Mr John Smeaton, and by making ſeveral reports upon that buſineſs to his Majeſty.

The traders in Glaſgow and Carron, who undertook the ſmall canal for lighters, which made ſo much noiſe laſt ſpring, have a degree of merit alſo, by their being the occaſion of ſtirring up in the public a ſpirit of inquiry and attention to this great object; and the noblemen and gentlemen who oppoſed this ſmall canal, and who ſo liberally and generouſly ſubſcribed large ſums for the carrying on of a more extenſive and beneficial communication, certainly deſerve highly of their country.

What they propoſe, I underſtand, is, to carry through a canal of 7 feet depth, and at a lockage-duty of 2 d. a-tun *per* mile upon the goods or ſhipping that paſs it: and by all I could ever learn from people of the beſt judgement in theſe matters, they cannot make a proper intereſt for their money at a lower toll.

This canal, I acknowledge, would be a beneficial thing to thoſe parts of the country which lie near it, eſpecially if the toll was more moderate. Nevertheleſs I flatter myſelf, that government will give ſuch aid to the ſubſcribers as will enable them to make a much better and deeper canal. And, with all due deference to high rank and ſuperior judgement, I humbly mean to offer ſome reaſons, tending to ſhew, that it is highly the intereſt of G. Britain and Ireland, that this communication between the two ſeas ſhould be executed upon the moſt beneficial and liberal plan that circumſtances and ſituation will admit; and that this may be effected from funds within Scotland itſelf, without impoſing any new tax, and without interrupting any other plan of public utility.

This work can only be done with propriety at firſt; for it is not of the nature of any other work which can eaſily be enlarged or extended afterwards. If this canal was to be carried through of 7 feet depth at preſent, and extended afterwards to 10 or 12 feet deep, a very conſiderable part of the expence would be totally loſt; and a ſtill greater inconvenience would ariſe, by the entire ſtop of the navigation for ſeveral years, during the execution of the new works; which would be a very great loſs to the ſhipping and trade of the kingdom, after it had been once turned into that channel. This is a circumſtance which perhaps will not generally occur to people out of trade; and I intreat, that it may be ever kept in view in the conſideration of this affair:

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for it will always be an argument of great weight, and perhaps irreſiſtible, when joined to the intereſt private people may have againſt any future extenſion of the canal after it is once completed. Let it be remarked alſo, that there is neither room nor water for two canals. Theſe reaſons, I hope, may ſerve as an excuſe for my inſiſting ſo ſtrenuouſly as I mean to do, for having the work done of proper dimenſions at firſt.

When the Board of Truſtees had this matter firſt under their deliberation, it appears obviouſly, by their different reports to his Majeſty, (and which were approved of by the King), that it was intended to be a free navigation, and to be the channel of conveyance between the two ſeas, not only of the home produce and trade of Great Britain and Ireland, but alſo of that of the northern parts of Europe with the weſt ſide, and of the whole trade of the colonies, eſpecially in time of war, with the eaſt ſide of the iſland. This appears by the reports themſelves, in the following words, *viz.* in that at Chriſtmas 1763:

" The particular advantages attending the navigation here pro-
" poſed will appear perhaps more extenſive and important than
" thoſe of any other that has been ever undertaken in this iſland,
" as it not only facilitates the internal intercourſe, and com-
" municates the inland parts of the country with the neighbour-
" ing ſea-ports, a benefit it has in common with other works of
" this kind, but by running quite acroſs the country from eaſt
" to weſt, it joins the two ſeas, and opens a ſafe conveyance,
" even in time of war, for the whole trade with the colonies, to
" all the eaſt coaſt of the iſland, and for the whole trade of Hol-
" land, Germany, and the other northern parts of Europe, to the
" weſt ſide of the iſland, without the neceſſity of making a te-
" dious, and often dangerous, circuit round either end of it."

And after recapitulating the ſubſtance of Mr Smeaton's firſt plan and report, they mention the amount of the eſtimate to be L. 78,970; and ſay, " This ſum is very ſmall, when com-
" pared with the great utility of the deſign, though far be-
" yond the reach of the funds under the management of the
" Truſtees. They can only, therefore, ſubmit it to your Maje-
" ſty, and beg leave humbly to recommend it to your royal con-
" ſideration."

And in the Truſtees report at Chriſtmas 1764 are the following words: " In conſequence of your Majeſty's approbation of the
" meaſures purſued by us for promoting a communication be-
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" tween the rivers Forth and Clyde, by a navigable canal, and " the gracious expreſſion of your Royal ſentiments with regard " to this deſign, that it would probably contribute very much to " the public utility and advantage, we feel ourſelves animated " with uncommon zeal for the proſecution of that important " work."

It is well known, that the funds intended for the execution of this work were the forfeited eſtates in Scotland; but it does not appear that the Board of Truſtees were aware, that the ſize of the canal whereof Mr Smeaton made his firſt plan, by their direction, being only 5 feet deep, was far too ſmall, and inadequate to the noble purpoſes they intended.

Next to a free navigation, a canal with a ſmall toll, ſuch as the trade to paſs by it can bear, is moſt eligible. A ſufficient depth of water is ſtill of greater importance, and, by the diſpatch it affords, with the ſaving of the expence and inconvenience of lighterage, and lodging of goods, will in reality prove of greater advantage to the general commerce and improvement of the kingdom, if attended even with a conſiderable toll, than a ſhallow canal would be, duty-free. This will be found an undiſputed fact, upon conſideration, by any perſon of ſkill in ſuch matters.

I conclude then, that a low toll, ſuch as the trade to paſs can bear, and depth of water, are the two capital points to intereſt the public in this communication; and without both of them, though it may accommodate thoſe parts lying near the canal, it will be of little benefit to diſtant parts, even of Scotland, and far leſs to England and Ireland: for it is in proportion to theſe only, but particularly to the depth of water, that the two laſt-mentioned countries will have intereſt in it; a circumſtance which I could wiſh to be kept in view in every conſideration of this affair.

If the duty be at 2 d. a-tun *per* mile lockage, it will ſtill be of advantage to the city of Glaſgow, and the other parts of the country, at both ends, and on the ſides of the canal; whoſe goods that are of any value can well afford to pay ſuch a tax, by ſuperſeding the neceſſity, otherwiſe unavoidable, of a high land-carriage. But it is obvious that this duty will be far too high for goods or ſhipping paſſing through the canal, to or from diſtant places of Great Britain, Ireland, or foreign parts; and in particular,

cular, it will be an abſolute bar to the tranſportation of many bulky articles of ſmall value, ſuch as coals, home ſalt, lime, limeſtone, paving, building, and iron-ſtone, various kinds of wood and lumber, charcoal, bark, ſoapers aſhes, kelp, ſlates, ſome ſpecies of corn, and a variety of other articles, which are eſſentially neceſſary to the commerce, manufactures, and improvements of this kingdom.

If any perſon doubts of the above, he may be pleaſed to conſider, that 2 d. a-tun *per* mile toll, will, upon many of the above goods, be 20, 30, and 40 *per cent.* of the prime coſt: on others, again, and which will conſtitute a great bulk of the navigation, it will be equal to the whole prime coſt: nay, on ſome of them (if they paſs through the whole length of the canal) it will be equal to double of the coſt. I conclude then that the lockage-duty cannot poſſibly, with a view to general utility, exceed 1 d. a tun *per* mile at moſt, unleſs it were thought proper to make it higher upon certain ſpecies of goods, of conſiderable value and ſmall bulk.

The circumſtances of this affair are greatly altered in favour of deep water ſince Mr Smeaton's ſecond report and plan, made laſt autumn, were publiſhed. He has given three eſtimates; one for a canal of 7 feet deep, amounting to L. 147,000; one for 8½ feet deep, amounting to L. 198,000; and one for 10 feet deep, amounting to L. 293,000.

Before that publication, it was very doubtful, 1*ſt*, Whether a ſufficiency of water could be collected at the ſummit, or point of partition, for a greater depth than 7 or 8 feet; and, 2*dly*, Whether it was practicable to carry the canal ſo as to enter in deeper water than 7 or 8 feet in Clyde. Mr Smeaton, by his laſt ſurvey and plan, made upon the ſuppoſition of 100,000 tuns of goods to paſs annually, has ſhewn, that water for ten times that quantity of goods can be collected at the ſummit or point of partition, in caſe the trade ſhould ever require it: And he has alſo ſhown, that the canal can be extended to enter the Clyde at a place where there is conſtantly 14 to 15 feet water, and that for a very moderate expence when compared with the object. His words, as to water, p. 13. of the Report, follow: "In ſhort, was ten times as much "water neceſſary for the canal as what appears to be ſo, there is "the evident means of bringing it, and amaſſing it, without put-"ting any ſtrain upon nature. I therefore beg leave once more "to repeat a paſſage, p. 16. of my former Report. "It does not

" admit of a doubt, but that Nature has furniſhed a practicabili-
" ty of bringing as much water to the point of partition as can
" poſſibly be wanted, and that by means ſufficiently ſimple and
" eaſy :" And again, " ſo that there is all poſſible certainty that
" the canal will be amply ſupplied from end to end."

Mr Smeaton indeed has not ſpecified the particular depth of water in Clyde ; but Mr Mackell, the other engineer, ſounded it, and found 14 to 15 feet at the intended place of entry ; and the water increaſes the further down the frith. This is confirmed by the accurate ſurveys made by order of the magiſtrates of Glaſgow, which are printed and publiſhed.

Theſe circumſtances afford the higheſt encouragement for having the work executed in the moſt proper and extenſive manner. It may be added, that the Forth is the nobleſt and ſafeſt inlet for ſhipping perhaps in Europe. The Clyde is alſo very commodious. The ſituation for a harbour at the eaſt end of the canal, as deſcribed by Mr Smeaton, is remarkably commodious, for depth of water, and eaſe of acceſs. That at the weſt end would alſo be very ſafe and convenient, being ſheltered from the ſea, and the weſterly winds, which alone are hurtful in that frith, by the caſtle and riſing grounds at Dumbarton. The whole track, excepting a few miles of uneven ground, ſeems, to uſe an expreſſion of Mr Smeaton's, as if formed by Nature for a proper communication between the two ſeas; and the canal can be carried through alſo, without joining in its internal track with any river or large ſtream of water, which are very dangerous to ſuch navigations.

Upon this occaſion I cannot help mentioning the extreme impropriety of comparing this communication, upon its preſent footing, with any inland navigation in England; the circumſtances and the object of them being in a great meaſure different. ——The navigations in England ſerve very good and uſeful purpoſes, in common with this, for the accommodation of the trade, manufactures, and agriculture, of the particular diſtricts through which they paſs. But Nature has made it impoſſible for any of them ever to anſwer the purpoſe of a general communication between the two ſeas; or, conſequently, to be any object for Great Britain and Ireland in general. There is not a place in the iſland, ſouth of the track in queſtion, where the diſtance between navigable tides of equal depth would not be five or ſix times at

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leaſt that of ours. The perpendicular height would alſo be double; and there are no ſuch ſafe or proper acceſſes with the ſea. ——It ſeems therefore unneceſſary to enter any further into the compariſon.

If the communication between the Forth and Clyde is executed at 10 feet deep, it would be of the higheſt advantage to the whole nation, particularly to South Britain; and it is aſſerted, that in ſuch event, the city of London alone, notwithſtanding its diſtance, will bring or ſend more value of goods through it than all Scotland together, eſpecially in time of war. I think it alſo highly probable, that England and Ireland together will, in general, carry three times the value of goods by this conveyance that Scotland will do: ſo it is equally an improper thing to conſider this affair as a Scotch one; it being in truth as much a general navigation for South Britain and Ireland as it is for North Britain. Thoſe who doubt of the intereſt which England and Ireland have in this navigation, by reaſon of their diſtance, may conſider, that the people living near, or on the ſide of a bridge, road, or ſea-paſſage, have often leſs intereſt in them than thoſe living at a diſtance:—Juſt as London and Amſterdam have a hundred times the intereſt in the paſſage between Calais and Dover, or between Gibraltar and Ceuta, that thoſe places ſituated on the ſides of them have.

If the canal is only 7 feet deep, the advantages to general trade will be very inconſiderable; for no veſſels above 6, or $6\frac{1}{2}$ feet draught of water, can paſs ſuch canal.

There are very few in the northern parts of the iſland, even in the coaſting-trade, of ſo ſmall a draught. The common run of the coaſting-veſſels in the frith of Forth, of 50 and 60 tuns burden, draw 8 feet water and upwards, when loaded.

The conſtructing of new ones would be attended with great expence; and, after all, ſuch a canal can only anſwer the purpoſes of the country near to it, and that but partially. It will never anſwer any great national purpoſe which would be obtained by a greater depth of water. They muſt have little experience in trade, who imagine, that the lighterage of goods at either end, and reſhipping at the other, will ſupply this defect; eſpecially if the goods require to be entered for duties or ſecurities to be given at a diſtance from the owner's place of reſidence.

True it is, that ſmall veſſels of 40 or 50 tuns may be conſtruct-

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ed to draw but 6 or 6½ feet water; and they may ſail with difficulty to any diſtance to which they can carry water and proviſions, even to America, or to the Eaſt Indies. But to what end will they go? Not ſurely to any good purpoſe of commerce, but only as advice-boats.

If the canal is 10 feet deep, a great part of the trade from the continent of Europe, with the weſt of Britain and Ireland, may paſs it; ſo will much of the trade between the city of London and theſe parts; and particularly, of the great linen-trade from Ireland, and the rich manufactures, and other goods of London, in return.

The herring and other fiſheries on the weſt ſide of Scotland employ a very large number of hands, and veſſels; no leſs than 267 buſſes, according to my information, have been cleared at the different cuſtomhouſes on the weſt ſide of Scotland this winter, for herrings alone, beſides what may be from other parts. Theſe veſſels, as I am informed, generally draw about 9 feet water or upwards, when loaded; conſequently they cannot paſs a canal of 7 feet deep: the people on the eaſt ſide of the iſland would therefore ſtill be cut off from theſe valuable fiſheries by buſſes, becauſe of the great diſtance of ſailing round by the Orkneys. The fiſhing-ſeaſon happens alſo generally ſo late in the year, that the paſſage that way is impracticable.

But if the canal is made of proper depth, the traders in the head of the frith of Forth will be little more than a day's ſailing from the fiſhing rendezvous of Campbelton. If the ſmall neck of land at or near Tarbat, which will be ſpoke further of afterwards, is alſo made navigable, they may be on the fiſhing banks or lochs in two or three days from their own home, inſtead of having a dangerous navigation, of ſeveral weeks at leaſt, in general, by the Orkneys, if they were to attempt this in the beginning of autumn, and wait till the fiſhing ſeaſon came on.

If there is deep water, then that valuable branch of the fiſheries will be open to all the eaſt coaſt, and we might expect to ſee buſſes there from Yarmouth, and other parts of England. When the fiſheries again ſhould, as has happened in former times, be moſt plentiful upon the eaſt ſide of the iſland, it will be open to thoſe who reſide on the weſt ſide, to the great general advantage of the kingdom, and the increaſe of our ſtock of ſeamen; and it may be obſerved, that theſe fiſheries are frequently much larger,

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on each ſide of the iſland, than the particular hands, ſtocks, or veſſels, belonging to either ſeparately, can manage; which will not probably be the caſe when a proper communication is made.

The valuable trade with the weſt ſide of Great Britain and Ireland, and particularly that with the colonies, cannot be carried on but with great diſadvantage by thoſe who live on the eaſt ſide of the iſland, eſpecially in the middle parts; by reaſon of the great diſtance, difficulty, and expence, of the navigation round either end of it; and the hazard from enemies in time of war. Theſe trades, even at preſent, are carried on by veſſels, many of which are under 10 feet draught of water, and the number of ſuch veſſels may be increaſed.

But as the law ſtands, rum and ſpirits cannot be imported from the colonies, in veſſels under 70 tuns burden, nor in caſks, under 60 gallons; and it cannot be exported, but to a few places in veſſels under 100 tuns, nor in caſks under 100 gallons; and the method very properly eſtabliſhed for admeaſurement is ſuch, that ordinary veſſels to anſwer it, will carry 15 or 20 *per cent.* more of tunnage, dead weight. No man will believe, that veſſels of that burden, and to draw but $6\frac{1}{2}$ feet water, will trade to the Weſt Indies, at leaſt with advantage. Thus the whole eaſt ſide of the iſland would be deprived of this great branch of commerce, if the depth is only 7 feet. Tobacco alſo can be exported only in large hogſheads, and in veſſels of 70 tuns by the ſame meaſurement; ſo that little or any of the great quantities of that article exported from Clyde to the northern parts of the continent, could paſs the canal. It may be noticed further, that ſmall veſſels drawing $6\frac{1}{2}$ feet water, ſuppoſing them conſtructed to anſwer the burthen, would be very improper for ſtowing ſuch large caſks of rum or tobacco.——If the canal then is made of 10 or more feet depth, inſtead of 7, what an amazing advantage may it prove, by the ſaving to this nation of freight and inſurance? which laſt article will be further ſpoke to afterwards.

Let no perſon here entertain ſo local, ſo mean, or ſo illiberal an idea, as to ſuppoſe that the branches of trade, which are carried on at particular places upon one ſide of the iſland, would, by this means only, run the hazard of being transferred to other places on the oppoſite ſide.——True it is, that various parts may ſuffer in ſome of the branches of trade they now enjoy: For ex-

ample, Leith, Borrowſtounneſs, and Carron, may be deprived of the carriage of part of the Engliſh and continental goods, which they bring at preſent for Glaſgow, and other places on the weſt ſide; as the people there, will, no doubt, bring them directly in their own bottoms.——The weſtern ports, on the other hand, may be deprived of the benefit of the conveyance of part of the goods from America, Ireland, or the weſt of England, for the conſumption of the eaſt coaſt.——But what are theſe particular local inconveniencies to the public? The general advantage of Great Britain and Ireland is the object; and whatever temporary inconveniencies may ariſe to particular places, the public in general muſt have great benefit.

Further it is maintained, that there is no particular place which can ſuffer in the manner above mentioned, in the trade ſhe now poſſeſſes, but will have the way paved for applying to other branches with equal advantage, by means of this communication. The fiſheries alſo, and the trade to the colonies, which, by their daily extenſion and increaſe, enlarges every day, without mentioning any others, are fields ſufficient for all the places or diſtricts in the above ſituation on both ſides of the iſland, without any danger of being overſtocked. The people employed in tranſporting goods by land at preſent, between the two friths, will be moſt immediately and ſenſibly affected by the intended change; and their caſe would be remarkably hard, if it were not obvious, that they can, with great facility, and equal advantage, turn their hands to lighterage, tracking of veſſels, and the like buſineſs, through the canal.

I am well informed, that the premiums of inſurance, during the two laſt wars, between London and the American colonies in the continent and iſlands, were generally double of what they were between theſe colonies and Clyde.

The premium, again, between the frith of Forth and London, was but $1\frac{1}{2}$ *per cent.* with convoys, which are very frequent and regular; and if the American inſurances with London be reckoned 16 *per cent.* at an average, there will be a ſaving of 6 *per cent.* on theſe premiums; and it may be more to the Engliſh ports lying north of London. The premiums from Ireland and the weſt ſide of Great Britain, round the Channel, and, *vice verſa*, from the eaſt ſide of them, will be much more lowered. For example,

A linen-ſhip from Belfaſt, or Londonderry, to London, or from London, with a variety of valuable goods, to theſe ports, may be inſured by the one courſe at 2 to 3 *per cent.* premium, while the other will coſt 10 or 12 *per cent.* and frequently much higher, beſides performing the voyage in leſs time by a navigation near one third ſhorter. The premiums from the weſt ſide of the iſland, and Ireland, with the northern parts of Europe, and *vice verſa*, will be lowered nearly in the ſame proportion. It will alſo be a great advantage to the eaſt ſide of the iſland, in the inſurance of their trade in time of war with the ſouthern parts of Europe. It may be obſerved likewiſe, that where inſurance is lowered, the freights will be ſo in ſome degree, eſpecially where the diſtance is alſo ſhortened; and both will tend greatly to the advantage of our trade and manufactures, and to give us a better chance in competition with foreign rivals.

It will be evident, from what is above ſaid, to any perſon who knows the immenſe value of the trade which may be carried on through this channel, that a very large ſum annually, on premiums and freights, muſt be ſaved to theſe kingdoms, eſpecially if the paſſage is made of proper depth.

It will be obvious alſo, what ſervice or protection we might afford to our friends or allies, in times of war, by this communication, and what a ſum might be drawn to the nation by a moderate toll from them; and that it will not only be a great convenience in times of war with France and Spain, but alſo with any of the northern powers of Europe, although the trade carried on by the Orkneys paſſage is in no degree to be compared with what paſſes by the Channel.

I have been informed by perſons of high rank in his Majeſty's navy, that if this communication is made of proper dimenſions, a very great number of cruiſers may be ſaved in the time of a war with France or Spain, and the trade would be better protected than at preſent. This is an object of no ſmall conſideration. Great Britain can now by her ſuperiority at ſea, and I hope will always be able, to protect her trade; but in the common viciſſitude of human affairs, it may happen, that through croſs accidents, diviſions, unſteadineſs, or inattention at home, or by the ſuperior ſteadineſs, addreſs, or good fortune of foreign adminiſtrations, the caſe may be altered, and in particular times we may be hard put to it for a ſufficient number of veſſels to protect our

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trade. In ſuch a ſituation, what an inconceivable advantage might not ſuch a communication between the two ſeas prove of to this nation and its allies?

I am aware that it may be ſaid, that the enemies privateers will infeſt the mouths of the two friths more when they find a greater reſort of ſhipping to them. To be ſure they will do ſo: but let it be remembered, how eaſy it is to guard theſe mouths; how difficult it will be for our enemies to carry the prizes they may make at ſuch a diſtance from their own coaſts; and how ſmall a riſk our veſſels will have by that paſſage, in compariſon with running the gauntlet for 100 or 130 leagues along the enemies coaſt through the Channel. It may perhaps alſo be ſaid, that regular convoys are generally appointed for the trade that paſſes by the Channel; but it will be noticed, that convoys are not always ready, nor can they be to or from every port. Further, it is well known, that waiting for convoys is too frequently, both to the merchant and owner of the ſhip, a remedy equal to or worſe than the diſeaſe.

In regard to internal police, it is obvious how much it may tend to the improvement of our lands, to the creation or extenſion of trades and manufactures, which at preſent either do not exiſt, or languiſh by the great diſtance between the places of the production of the raw materials, and thoſe that are properly ſituated for working them up, or for their conſumption.

The keeping of the great article of corn at a mean or moderate price, is juſtly a great object of the legiſlature.

A proper communication eſtabliſhed between the two ſeas would tend greatly to this valuable end, and more, I do maintain, than any meaſure whatever that will be deviſed, other than the capital one of increaſing the quantities grown.

I have ſome experience in this branch, and ſay further, that it will in ſome degree encourage an additional growth, becauſe corn will be conveyed with much more facility, and in many caſes at leſs than half the expence of what it preſently is between the places of growth and thoſe of conſumption; which, in ſo far as the quantities go, will be like a bounty on home conſumption.

The countries on the weſt ſide of the iſland are known to depend upon thoſe on the eaſt (even in times of plenty) for part of their ſubſiſtence; and it will be found, that upon any failure of the crops, the prices begin to grow high firſt on the weſt ſide, and

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which, once begun, naturely ſpreads over the kingdom. This is often occaſioned by the great expence and difficulty of navigation by either ends of the iſland, particularly in the winter-ſeaſon, or even early in the ſpring, in ſo much that various parts of the weſt coaſt are often upon the point of ſtarving before ſupplies in the ſpring can reach them. If the communication in queſtion is made of proper dimenſions, its effects will be obvious to every perſon; as veſſels can paſs in much ſhorter time, at lower freights and inſurance, and at all times of the year, if the canal is not froze up, which will ſeldom happen for any continuance in a track ſo ſhort between the tides.

The facility it will give to the tranſportation of corn from the continent to the weſt coaſt and Ireland, or, *vice verſa*, from America or Ireland, for the ſupply of the eaſt coaſt, when ſuch importations are neceſſary, will be great alſo, and both be much heightened in time of war. In ſhort, in regard to this capital article of corn, it will, in ſome meaſure, be like removing an obſtruction in the circulation of the blood, and giving it a free paſſage into all parts of the body.

If any perſon ſhould think, that this great object can be obtained by making a paſſage for veſſels drawing 6 or 6½ feet water, he certainly does not underſtand trade, or has not conſidered it fully. Such a communication may indeed be very uſeful between the countries or ports immediately joining the ends of the canal, but will never anſwer any general national purpoſe; eſpecially in the winter-ſeaſon. For it will obviouſly never anſwer the purpoſes of importation either from eaſt or weſt; nor can it be ſuppoſed to do ſo for veſſels loading, for example, at the great corn-ports of Yarmouth, Lynn, Hull, Stockton, or Alemouth, for the weſt ſide of the iſland, or Ireland.

In time of tumults or inſurrections, if ſuch ſhould be on the weſt ſide of Great Britain or Ireland, or of piratical incurſions or invaſions, the facility that ſuch a communication will give in the tranſportation of artillery, ſtores, or even troops, from either ſide of the iſland to the other, and in the ſupplying of ſhipping, forts, camps, or garriſons, will obviouſly be great; and the ſtrength of the kingdom, by its being rendered more compact, and, as it were, contracted within a narrower circle, will be increaſed. Its riches muſt alſo be equally increaſed by the greater facility, and

ſmaller expence, with which every production, manufacture, or commodity, will be conveyed from one part of the kingdom to another.

If it is objected, That the execution of ſuch a canal would require too long a time; this objection will operate equally againſt every great public work, which muſt of neceſſity take up time. The ſame argument would have prevented our ever building a large man of war. The bridges over the Thames, or that over the North Loch here, would have been built of wood, and only of 20 feet wide, according to this doctrine, that we might have had the uſe of them ſooner; and it would be a reaſon for planting willows in place of oaks, becauſe of the difference in the time of growth.

But further, I beg leave to mention, that the great canal of Languedoc was executed in about fifteen years, though it met with frequent interruptions. It may be added, that during eight years of this period, France was engaged in a heavy war with the greateſt part of Europe, and her hands ſo ſcarce, that ſhe was forced, in the year 1675, to call out the *Arrier Ban* (a thing very uncommon) to oppoſe her enemies. The execution of ſuch works with diſpatch, is certainly known better now than it was in that period; and a Britiſh man can, I preſume, plan as well, and execute as much, as a Frenchman.

The diſtance and perpendicular height was above four times that of ours, and the number of locks, ſluices, bridges, *&c.* would be in proportion. The ground was more uneven, and in general far more rocky, and difficult to work; hills in ſome places were to be vaulted through for a great length; and above all, there was far more difficulty in collecting water at the point of partition, and in fencing againſt rivers.

Why then ſhould we doubt of ſeeing the communication in queſtion executed within five or ſix years, if it be ſet about with ſpirit and ſteadineſs? It is no anſwer to ſay, That France could command a greater number of hands than Britain; for a large number are not neceſſary. Two or three thouſand good hands will probably finiſh the deepeſt plan within that time; and there will be little difficulty in collecting theſe, or a greater number.

Some may object, That it would increaſe the wages of labouring people in Scotland, by occaſioning a ſcarcity of hands, which would be a loſs to the country. But this alſo proves too much,

much, and will be a reaſon againſt every great work. I ſay further, in the *firſt* place, It is not certain that wages will be raiſed; as great numbers of people may be drawn, for the digging work, from the highlands, iſlands, and other parts of the country, where they are at preſent idle and unemployed; and this will be an advantage to the country, by training up ſo many hands to uſeful labour, and making them plentiful after this work is finiſhed. It may alſo prevent improper migrations to other countries.—2*dly*, Suppoſing the wages were to be raiſed, I am inclined to think the labouring people of Scotland in general have rather too low wages. If they were higher, they would feed and clothe better, and conſequently do more work: And it will be found from experience, that the loweſt wages do not in general produce the cheapeſt work. Further, they are all members of the community as well as other people; what they earn is generally ſpent on our home productions only, and the value goes immediately back to the manufacturer, farmer, or landholder.

If ſuch advance was to take place, it ought the leſs to be grudged at preſent, when the price of proviſions, which makes ſo very great a proportion of a labourer's expence of living above what it is to other ranks of people, are ſo uncommonly high.

Some may ſay, That there is no precedent in any other part of the world for canals of this depth: That it will be impracticable for ſea-veſſels, or other than ſloops, to paſs through locks and draw-bridges: That large veſſels cannot be drawn by horſes in high winds; and that the inequality of the ground is an inſuperable obſtacle.

To theſe I anſwer, That the royal canal in China, according to the informations from that country, is in general about 9 feet deep, and, with branches, is 1800 miles long. The ground there may be generally flat, but it cannot in ſuch a track be all ſo; and it cannot well in any place be flatter than 25 or 30 miles of this track is: And it will be ſtrange if Great Britain cannot make a paſſage through 5 or 6 miles of ground, uneven indeed, but not remarkably ſo. Sea-veſſels of conſiderable burden, and with two and three maſts, paſs the Dutch canals in Holland and Zealand, through many ſluices or locks, and numerous draw-bridges, particularly between Rotterdam and Amſterdam; and veſſels of the greateſt ſize can paſs in the ſame way, perhaps more eaſily than they can in a narrow, crooked river, if there be only proper depth and width. Eaſt-Indiamen are dragged

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through the canal at Middleburgh by horſes. Large veſſels of ſome hundred tuns are conveyed in the ſame manner againſt the ſtream in our own rivers; and abroad, eſpecially on the Rhine, veſſels of as great burden as our Indiamen, are towed up by horſes againſt the ſtream. Large Engliſh colliers go from Oſtend to Bruges in the canal, and, I believe, ſome of them from thence to Ghent. The canal to this laſt place paſſes through ſome very uneven ground, and it has a number of locks; but of what ſize the veſſels are which paſs it, I am not at preſent informed.

Every gate upon a wet or dry dock is in effect a lock; theſe even our large men of war enter; and a veſſel that paſſes one lock, can with time paſs fifty. Further, as I before ſaid, of about 35 miles between the two friths, ſuppoſing the largeſt track taken, Nature has been ſo beneficent, that about 25 or 30 miles of it is nearly on a dead level; or perhaps as flat as in China or Holland. The uſe of locks is to correct, and come in aid of the inequality of ground; and every lock makes a level to the next one in effect. So that in reality, if a ſufficient quantity of water can only be got to a point of partition, for a reaſonable expence, as in the preſent caſe, there is little difficulty in aſcending any height of ground; far leſs in the ſmall riſe now in queſtion.

There may no doubt, at times, be ſuch ſtorms of wind, when, in the beſt harbour in Britain, a veſſel cannot be unmoored even to wind her; and at ſuch times all navigation, whether in canals or elſewhere, muſt ſtop: but in ordinary weather there can be no ſtop; and it will be obvious, that if a croſs or briſk gale ſhould retard a large veſſel in paſſing the one way, it muſt facilitate or quicken the paſſage, in the ſame degree, of another, from the oppoſite ſide of the country.

If it is ſtill ſaid, That there is no proper precedent in any other country for ſea-veſſels paſſing canals; I ſay, There is no place in this part of the world, where the advantage would be ſo great by ſuch a communication, otherwiſe they would have been more general before now. Further, this great nation (though yet behind ſome others in regard to inland navigations) has given many important precedents to the reſt of the world in other matters. It is for her intereſt, and for her honour, to ſet a precedent in this caſe, if there be none elſewhere; and ſhe has the means of executing it eaſily.

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The forfeited eſtates in Scotland, now in the hands of the crown, was the fund intended for the execution of this work, as already mentioned. The groſs rent of theſe annexed to the crown, (excluſive of woods), may be about L. 8500 *per ann.*; and that of thoſe unannexed, under the management of the court of exchequer, about L. 1500. If theſe eſtates were ſold at the preſent rates which lands in their reſpective neighbourhoods give, there would, no doubt, be an ample fund for making the canal of the higheſt dimenſions, free of toll, and a conſiderable reverſion beſides. But it does not appear, that an annual ſum can be afforded out of them, as a fund for borrowing money upon, equal to this undertaking, or even to aid it properly; and it would be an unprofitable method to borrow upon them, as probably they do not yield clear above 2 or perhaps $1\frac{1}{2}$ *per cent.* of the ſums they would ſell for.

The act for annexing theſe eſtates to the crown, was planned by a wiſe and great patriot, for noble and valuable purpoſes. —— It becomes not me to ſay, how far it would be proper to alienate ſuch of thoſe eſtates as are ſituated in the proper highland uncivilized country. Many people believe, it would be more proper to add to them thoſe eſtates above mentioned, which are alike ſituated, and not yet annexed.

But there are certain parts of thoſe forfeited eſtates, particularly of that of Perth, ſituated in the low country, where, according to my information, the people are as much civilized as in Mid Lothian or Middleſex.

There ſurely can lie little, I will ſay, no objection whatever, to a ſale of ſuch parts, and to the applying of the produce to the making of the canal, if it be ſhewn further, (as I mean to do), that no meaſure whatever can tend ſo eſſentially, ſo radically, or ſo permanently, to the wiſe and valuable purpoſes of the anexation-act itſelf, as the making of this communication.

The great diſtance from the civilized trading parts of Scotland, and the almoſt inſuperable difficulties of acceſs, are the chief, perhaps the only cauſes, of the long unpoliſhed rude ſtate of the weſt highlands and iſlands. Every one knows they are inacceſſible from the eaſt ſide by land for any purpoſes of trade or improvement; and the communication by ſea from the frith of Forth by the Orkneys, is not only about 500 Engliſh miles diſtant from

Fort-William, which I reckon the centre of that country, but alſo impracticable in winter.

If the intended canal is made, Fort-William, for example, will be drawn immediately 200 miles nearer by water to Edinburgh, and will be acceſſible at all times of the year. The ſmall neck of land near Tarbot, or rather at Loch Crinan, where the peninſula of Kintyre joins the main land of Argyle, can be made navigable, according to my information from perſons of ſkill, who have inſpected and ſurveyed it with that view, for a very few thouſand pounds.

If this alſo is done, theſe highlands and iſlands will be brought about 150 miles nearer by water to the loyal and large trading city of Glaſgow, and the neighbouring civilized country, and they will be drawn above 300 miles nearer to Edinburgh, and the ſouth-eaſt parts of Britain. I pretend not to a minute accuracy in theſe diſtances, nor is it material. Any perſon who pleaſes to look at a map may ſatisfy himſelf.

It will be obvious what amazing influence this eaſe of communication will in time effect, by uniting theſe parts in ſome meaſure with the civilized country; by promoting fiſheries, manufactures, and induſtry, among them; giving the inhabitants thereby the means of being conſtantly and uſefully employed; and baniſhing idleneſs, the great ſource of vice, and diſloyalty in proportion.

I beg leave upon this head juſt ſhortly to hint a ſubſidiary aid to the communication with the highlands and iſlands by land. The poſts take at preſent twelve days during ſummer, in going and coming, between Glaſgow and Fort-William, and ten days between Edinburgh and that place, by making a ſtrange circuit of about 400 miles round by Aberdeen, Banff, and Inverneſs. They may paſs into the heart of the highlands directly by Stirling, which is diſtant only 63 miles of made road from Fort-William, and be diſtributed properly from thence with the neighbouring country and iſlands. The returns may then be in three or four days with Edinburgh and Glaſgow, and in proportion with London; and the expence, if any, will not be worth mentioning.

Poſts cannot paſs too frequently or too quickly with a country that wants to be civilized and improved. The effects of them will be much greater in a ſhort time than people are aware of, for the promoting of order, commerce, and induſtry, in ſuch a tract,

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as well as of intelligence civil and military; and I am inclined to think, that ſuch an eſtabliſhment, when joined to the great means of the canal, will contribute more to the wiſe purpoſes of the annexation-act in ten years, than all the produce of the forfeited eſtates, as we have ſeen them hitherto laid out, will do in a century.

No reflection whatever is here meant upon the Honourable Board of Truſtees, who, it is not doubted, have acted as well as circumſtances and the nature of their conſtitution could admit.

If any doubt of the efficacy of the meaſures above mentioned, I beg they would be pleaſed to conſider, that the making of ſuch communications operates ſteadily and permanently, without any interruption, or ever ſleeping: and not like the wiſeſt laws; the effects of which, though framed with the higheſt foreſight of human wiſdom, depend almoſt totally upon a proper and ſteady execution, which is perhaps not to expected, at leaſt for any continuance, in the nature of our conſtitution.

Some may object to the ſale of theſe low-country eſtates, becauſe the Truſtees have been making ſome efforts to promote a better ſpecies of huſbandry in that part of the country than formerly.

This is a very right meaſure; but ſurely it is well known, that ſuch examples in huſbandry, at leaſt equally good, are making by various private proprietors, as well as leſſees, in different parts of Scotland; and that if theſe eſtates are parcelled out to ſmall proprietors, the improvements in huſbandry have a greater chance of being carried on with more ſpirit and ſteadineſs, and to a greater degree of perfection, than they can well be under the direction of a numerous fluctuating board, reſiding at a diſtance; not to mention, that the Truſtees may ſtill promote the ſame examples of huſbandry in other parts of the country, which will be equal to the public.

If a part of the Perth eſtate is ſold, and L. 50,000 of the price is given to the ſubſcribers for the canal, they will, I preſume, be able to execute it at 7 feet deep, and at no more than 1 d. a-tun *per* mile lockage. If they have L. 70,000, they may be able to do it at $8\frac{1}{2}$ feet deep, and the ſame toll. If they were to get L. 100,000, they will be able to make it 10 feet deep, at no higher lockage than 1 d. *per* tun, and probably with more profit alſo to themſelves than by any of the other ſizes. For there does

not ſeem the ſame neceſſity for 10 feet deep upon the ſide cut to Glaſgow; and many, from their knowledge of the rates of labour in Scotland, are of opinion, that certain parts of this laſt eſtimate may be executed cheaper than they are rated at by Mr Smeaton, eſpecially the digging at 6 d. *per* cubic yard; upon which there is added alſo 20 *per cent.* for contingencies.

It is a miſtaken notion, that additional depth will increaſe the expence in any greater degree than the meaſure of the quantity of work to be done: for unleſs ſome very unforeſeen difficulties ſhould occur, it will be otherwiſe; and the *extra* rate *per* yard for digging 2 or 3 feet deeper will be more than balanced by other ſavings. The expences of the act of parliament, the ſurveys, the charge of valuations by juries, ſuperintendency, and expences of management afterwards, the collecting of the tolls, the attendance upon locks and bridges, the quantity of land for ſlops, towing-paths, and turning-places, and the making of them, the purchaſes of water, the dams for reſervoirs, and the harbours and quays at each end of the canal, will be nearly the ſame in a ſmall as in a large one.

The numbers of wharfs, locks, bridges, tunnels, *&c.* will be the ſame, and the expence will not be greatly increaſed: at leaſt, on the whole, it will be in no degree ſo, in proportion to the *extra* quantity of tunnage that will ariſe from deep water. For it will be found, as already mentioned, when examined to the bottom, that even 2 d. a-tun *per* mile lockage will not be any wiſe equal to the inconvenience of lightering or unloading goods, nor of courſe ſo great a bar to the increaſe of the tunnage. It may be noticed alſo, that a leſs quantity of water will be expended in carrying the ſame quantity of tunnage in large veſſels, than by carrying it in ſmall ones; becauſe the ſmalleſt veſſel will expend a lockful of water in paſſing, and the largeſt will take no more.

If any one doubts of what is above ſaid, regarding the proportion of expence between deep and ſhallow water, I can anſwer, That it is the opinion of perſons well ſkilled in the nature of ſuch works, and even of Mr Smeaton himſelf, as appears by a letter of his, publiſhed during the diſpute laſt ſpring, about the ſmall Glaſgow canal; and his opinion ought to be deciſive in this queſtion.

I conclude, then, that it will be for the intereſt even of the ſubſcribers to make the communication of a proper depth; and very probably ſuch will be the condition of their obtaining public aid.

To this there can ſeem no reaſonable objection, if it were alſo a condition with them, that regular accounts ſhould be kept of the undertaking, and that the profits, if they exceed $7\frac{1}{2}$ *per cent.* ſhould either go to a further lowering of the toll, for the benefit of the public, or to the purpoſes of the annexation-act; and further, that the whole ſhould, at any time, be ſubject to redemption by parliament, upon making good intereſt, at the rate of $7\frac{1}{2}$ *per cent. per annum*, to the proprietors for the time their money may have been laid out.

If it be objected ſtill, That the preſent neat income of the forfeited eſtates ſhould be kept up full and inviolated, for the purpoſes of the annexation-act:

I anſwer, That by annexing the eſtates above mentioned, which are now under the management of the court of exchequer, and by the improvement of the rents of the whole that lie on the weſt coaſt, which will undoubtedly happen by means of the above communications, and a proper management, the fund will remain nearly the ſame; nay it will probably be increaſed greatly above what it is at preſent.

BUT the more one thinks, my Lord, on this ſubject of the communication between the two ſeas, the more it appears to be an object too great perhaps to be truſted in the hands even of any ſet of proprietors, and proper to be in the hands only of government itſelf.

If this is the caſe, the communication will perhaps be carried through at as great depth as the entry into Clyde will permit, if the engineer thinks that practicable. By this means cutters, ordnance-ſloops, tranſports, and occaſionally alſo ſloops of war, and poſſibly ſmall frigates, by lightering their guns, might paſs between the two ſeas, the advantages of which to the public ſervice will be obvious; the large ſhips in the American and other trades would then paſs; and if in after times part of the Eaſt-India trade ſhould be carried on in ſmaller bottoms than at preſent, the paſſage would be open for it likewiſe. —— Perhaps alſo little or no toll may be taken, or but as much as will be

ſufficient for management and repairs, at leaſt on Britiſh veſſels, though there might be a duty on foreigners.

If all the low-country forfeited eſtates were ſold, and the price applied to the canal, and if the whole of the reſt were annexed, and continued under the management of the ſame truſtees, but the produce to be a fund for raiſing money upon, to be applied in the ſame way, it would go a great length.

The legiſlature of Ireland alſo, ſo conſtant and generous in promoting every national undertaking, would no doubt contribute to this one, upon a proper application, as it would be of ſo much advantage to that kingdom. By theſe means there might be fund enough to carry through the greateſt depth, and at no higher lockage than a halfpenny a-tun on our own veſſels. The making of the canal and the toll might be under the management of the ſame truſtees, with ſome others joined to them, to ſit *de die in diem*, as the boards of exciſe and cuſtoms do, and to be accountable annually to the board of treaſury, or in exchequer, as theſe boards are. The ſurplus of the toll might be applied to the purpoſes of the annexation-act, or to the lowering of it further, on Britiſh veſſels, as might be thought proper.

Other better modes of applying theſe eſtates to this canal, may perhaps be deviſed. But if it ſhould be thought improper to apply them in that manner at all, or if funds are ſtill wanting, I ſcruple not to ſay, that no work has occurred, of a great while paſt, for the execution of which we might more juſtly burden our poſterity with a ſmall tax.

The bridges over the Thames are noble and uſeful national works; ſo is the preſent. I mean no compariſon; but the method of raiſing the funds, by lotteries, or otherwiſe, and the manner of execution, may not improperly, in caſe of need, be applied to this work, as well as to them. Every circumſtance of ſituation, and the great advantages that will ariſe from a proper execution of this work, do, as before ſaid, excite and encourage us to carry it through, of the greateſt dimenſions that the water and other circumſtances will admit.

I beg leave to add two other conſiderations of ſome importance. We are happily in profound peace with all the world, and hands in general, and even ſome of the ſoldiery, if it was neceſſary, can more eaſily be ſpared at preſent for ſuch an undertaking, than at another ſeaſon.

We

We have an engineer alſo, in the prime of life, at preſent, able to conduct a work of this magnitude properly, (I mean Mr Smeaton); who is ſaid, by people of ſkill, to be perhaps the ableſt man, at this time in Europe, for conducting a work of this nature; and it will be wiſe to avail ourſelves, while we can, of his abilities.

If the expence ſhould be reckoned even at half a million, for a round ſum, to make the paſſage of proper depth, the intereſt of this, if borrowed by the public at 3 *per cent.* is but L. 15,000, and a toll of 1 d. a-tun, upon 100,000 tuns of goods, call it for forty miles, including the Glaſgow ſide-branch, is near L. 17,000. But in all probability this quantity will be doubled, in a ſhort courſe of years, if the paſſage is made of full depth; ſo that one halfpenny a-tun might go near to anſwer the intereſt.

Let it be alſo conſidered, that the expending of ſuch a ſum of money within the kingdom is no wiſe ſimilar to the giving of it in foreign ſubſidies, or in making of foreign expeditions or conqueſts: for the whole ſum will circulate at home; almoſt every material, even to the iron work, will be of our own produce; and it will occaſion a conſiderable increaſe on the revenues of cuſtoms, exciſes, *&c.* by the creation of new trades and manufactures, and by the advantages it will give to thoſe which now exiſt. It may be alſo noticed, that the advantages it will bring us will be permanent, and cannot be taken away from us by our enemies or rivals in trade, as a conqueſt, or a particular ſpecies of trade or manufacture, might be.

Upon the whole, it would ſeem no difficult thing to prove, that if half a million, or even a larger ſum, was ſunk in making this a proper and free communication, there might be as much, and perhaps a great deal more, fully gained to theſe nations, in one ſingle year of a general war, by the advantages it would give to our trade, manufactures, and agriculture, by the increaſe of revenue, by the ſaving of the charge of a number of cruiſers, and by the addition of ſtrength and ſecurity it would give to this kingdom and its allies.

That I may be thought to ſpeak here within bounds, let it be noticed, for one article, that the value, in time of war, of the foreign and home trade of the port of London alone, outward and inward, which paſſes through the Channel, and including the value of the ſhipping which carries it, and falls to be inſured twice, and

ſometimes

ſometimes oftener, in a year, cannot be computed much under fifteen millions *per annum*, excluſive of the Eaſt-India trade *.

It is not material to the argument though this calculation be over-rated: for 5 *per cent.* ſaved upon the inſurance of one third of the ſum, would be L. 250,000; and it will be eaſy to conceive from thence what the *whole* advantages, of various kinds, to Great Britain and Ireland in general, when collected, may amount to.

Suffer me then, once more, to mention what ſhould be ever kept in view in the conſideration of this affair, That England is intereſted in this canal, only in proportion to the lowneſs of the toll, and the depth of water, but eſpecially the laſt. If the paſſage is made deep enough, it will be of the moſt capital importance to her intereſts, perhaps ten times more ſo than it will be of to Scotland, becauſe there is no compariſon in the value of their trade. Further, whatever benefit Scotland may receive, it will in ſome degree return to England, by enabling the former to pay a greater ſhare of the public taxes, which no country can do without the means. I will add an agreeable and uncommon circumſtance, That this advantage to England may be obtained, either in whole or in part, by means of what may be termed at preſent a Scotch fund, without any new burden on herſelf.

THE firſt ſenator of ancient Rome, my Lord, in the moſt flouriſhing times of the republic, would have thought it the higheſt honour to have had the patronage and ſuperintendence of a work of this kind. The Romans, the wiſeſt people on record, and famous for the great utility and capacity of their public works, if they had been in our ſituation, would certainly have executed this work in ſuch a manner as would have fully anſwered the ends propoſed, and ſuitable to the dignity of the ſtate.

* The quantity of ſugar may probably increaſe; and, according to my information, it is at preſent 100,000 hds; which, at L. 20 each, is L. 2,000,000 0 0
The colonies are much in our debt, ſo it is reaſonable to ſuppoſe, that at leaſt an equal value in goods goes out, - - - 2,000,000 0 0
90,000 tuns of ſhipping for carrying the above ſugar, reckoned double, as they muſt be twice inſured, at L. 7 per tun, amounts to - - 1,260,000 0 0
L. 5,260,000 0 0

From this ſingle article it may be judged what the collected value of the other foreign exports, imports, and ſhipping, may be, when joined to the great trade with the weſt ſide of the iſland, and Ireland.

The

The great ſoul of Julius Cæſar projected various works of this kind for the ſafety and convenience of the empire; one in particular, of a very ſimilar nature to this, over the iſthmus of Corinth, to join the Ionian and Egean ſeas, and to avoid the long and dangerous navigation round Peloponeſus. This work he certainly intended, not for the benefit of Greece, or the country near the iſthmus, but for that of Rome, though it was 7 or 800 miles diſtant from that city, in order to facilitate her communication with the eaſtern provinces, and much as the preſent paſſage would facilitate the communication between London and the diſtant parts of the Britiſh empire.

I will not mention the honour acquired by a Czar Peter, a Lewis XIV. or a Colbert, by undertakings of this ſort; but will beg leave to mention names ſtill more venerable in this country, and whoſe examples, eſpecially in regard to œconomy, are generally quoted, as worthy of the imitation of thoſe who have the government of ſtates; I mean Henry IV. of France, and his firſt miniſter Sully.

This King, one of the greateſt and beſt of modern times, conſidered *the augmentation and ſecurity of commerce as of the firſt importance to the ſtate* *, and delighted himſelf in public works tending to that end: he ſat frequently in conſultation with his miniſters, about the canal of Briare to join the rivers Seine and Loire, and laid out a conſiderable ſum of public money upon the undertaking, though no prince was more ſaving of his revenues; and the object was in no degree to be compared with that now in queſtion.

The miniſter Sully conſidered ſuch communications as *the infallible means* † (I uſe his own words) of drawing great commerce to a country without much expence: and though, no doubt, ſufficiently occupied by other weighty matters, he even went in perſon to accompany the engineers in their ſurveys for the canal of Briare, leſt they ſhould make any miſtakes in taking their heights or diſtances.

* Tranſlation of Sully's Memoirs, vol. 3. book 19. p. 348. Edinburgh edition, 1760.—Thuanus, lib. 132. and the contemporary hiſtorians.

† Sully's Memoirs, ibid. p. 339, & 348.

Under the ſhelter of ſuch reſpectable names, I humbly preſume, though a private perſon, to ſay, That this affair is highly deſerving of the moſt ſerious attention of the legiſlature, and of adminiſtration. I flatter myſelf, that it may be laid again, upon its moſt extenſive and enlarged plan, before our moſt gracious Sovereign, the tender Father of his people, *and the only proper patron of a work of this magnitude.*

If it is only taken into ſerious and full deliberation, its great utility and importance will appear ſo obvious, that we need not much fear of its being carried into proper execution.—— His Majeſty will have an opportunity, by the patronage of this great work, of tranſmitting his name to poſterity, with equal glory and endearment as by his victories and conqueſts, or as any of his moſt illuſtrious predeceſſors have had by the ſplendor of their civil or martial atchievements; for the true and real glory of a ſovereign, or of a legiſlature, conſiſts in performing ſuch acts as the ſubjects can reap the moſt ſolid and laſting advantages from.—— I ſhall conclude, with the words of Mr Pope in his epiſtle to Lord Burlington, regarding public works of a ſimilar, but not ſo capital a nature as this:

" Bid harbours open, public ways extend;
" Bid temples, worthier of the God, aſcend;
" Bid the broad arch the dangerous flood contain,
" The mole projected break the roaring main;
" Back to his bounds their ſubject ſea command,
" And roll obedient rivers through the land:
" Theſe honours peace to happy Britain brings;
" THESE ARE IMPERIAL WORKS, AND WORTHY KINGS."

I have the honour to be, *&c.*

EDINBURGH, 20*th January*, 1768.

P.S.

P. S. It eſcaped me, in the former part of this letter, to mention, that there are very large fields of coals on and near the track of this canal, eſpecially towards the weſt ſide, where there are ſeams of the Newcaſtle kind; and the prices are lower than in any other place of the iſland near to navigation. If coals in the north of England ſhould, in after times, turn ſcarce, or dearer, by the deepneſs of the pits, this may be a circumſtance of very great importance to the city of London, and the ſouth-eaſt parts of England. But it will be obvious, that coals can afford to pay but a very ſmall toll; and they cannot be conveyed at a moderate rate to the conſumer but by large veſſels.

E R R A T A.

Pag. 10. *lin. ult. read,* the eaſt ſide to them.

Pag. 13. *lin.* 1. *read,* naturally

Pag. 16. *lin.* 14. *read,* longeſt track

Pag. 21. *lin.* 22. *read,* will probably ſoon be increaſed